

Serial No. 10/585,986 6
Docket No. SH-0062PCTUS
RYU.026

AMENDMENTS TO THE CLAIMS:

Please add new claims and amend the claims as follows:

1. (Currently Amended) A method of elongating optical fiber base material comprising:
heating and softening a base material ingot in ~~such as an electric furnace~~ a heating
means;
drawing said ingot with a pair of pinch rollers; and
elongating the ingot to make base material rod ~~having~~ including a smaller diameter
than said ingot,
wherein ~~either~~ a roller groove of said pinch rollers ~~having~~ includes one of a curvature
radius which is ~~larger~~ greater than the outer diameter of said base material rod ~~[[or]]~~ and a V-
shaped roller groove ~~having the~~ with a cross section ~~consisting of~~ including straight lines ~~[[is]]~~
formed on each surface of said pinch rollers ~~made~~ comprised of metal, and
wherein the facing roller grooves respectively formed on the surfaces of a pair of said
pinch rollers nip and draw said base material rod.
2. (Withdrawn-Currently Amended) A method of elongating optical fiber base material
comprising:
heating and softening base material ingot in ~~such as an electric furnace~~ a heating
means;
drawing said ingot with a pair of pinch rollers; and

Serial No. 10/585,986 7
Docket No. SH-0062PCTUS
RYU.026

elongating the ingot to make base material rod ~~having~~ including a smaller diameter than said ingot,

wherein using an untapered shaft ~~having~~ including a reference edge face which is parallel to the elongating direction, said pinch rollers are pushed against the reference edge face to be fitted and fixed to the untapered shaft, and

wherein the position of the groove center of facing roller grooves respectively formed on the surfaces of said pair of pinch rollers is adjusted with a positioning adjustment apparatus which supports said pinch rollers.

3. (Currently Amended) The method of elongating optical fiber base material according to claim 1, wherein a shorter rod ~~having~~ including almost substantially the same outer diameter as the desired base material rod is nipped and held by a pair of pinch rollers, and

wherein a positioning adjustment apparatus supporting said pinch rollers ~~is adjusted~~ adjusts the position of the apparatus using one of a vertical line of laser beam ~~[[or]]~~ and a plumb bob, which is parallel to the traveling direction of the base material ingot, runs through the middle of the ~~heater such as an electric furnace~~ heating means and the center point of the shorter rod, to determine the positions of said pinch rollers.

4. (Currently Amended) The method of elongating optical fiber base material according to claim 1, wherein a jig comprising an upper board and a cylindrical part is mounted on a pair of pinch rollers, and

a positioning adjustment apparatus supporting said pinch rollers ~~is adjusted~~ adjusts the position of the apparatus using a vertical line of laser beam or a plumb bob, which is parallel

Serial No. 10/585,986 8
Docket No. SH-0062PCTUS
RYU.026

to the traveling direction of the base material ingot, runs through the middle of the ~~heater such as an electric furnace~~ heating means and the center point of the shorter rod, to determine the positions of said pinch rollers.

5. (Currently Amended) An apparatus for elongating optical fiber base material, comprising:

a heating means which heats and softens a base material ingot ~~in such as an electric furnace;~~

a pair of pinch rollers which draws ~~with a pair of pinch roller~~[[:]], and elongates the ingot to make a base material rod ~~having including~~ a smaller diameter than the ingot, ~~comprising said pair of pinch rollers which are made of~~ comprised of metal, and respectively ~~have include~~ either one of a roller groove ~~having including~~ a curvature radius ~~which is larger greater~~ than the outer diameter of said base material rod [[or]] and a V-shaped roller groove ~~having comprising~~ [[the]] a cross section ~~consisting of including~~ straight lines on the surfaces of said pinch rollers.

6. (Withdrawn-Currently Amended) An apparatus for elongating optical fiber base material by heating and softening base material ingot ~~in such as an electric furnace~~ a heating means[[:]], comprising:

a pair of pinch rollers drawing ~~with a pair of pinch roller;~~ and elongating to make base material rod ~~having including~~ a smaller diameter than the ingot,

wherein: an untapered shaft which holds said pinch rollers in the way said pinch rollers are rotatable, and [[has]] includes a reference edge face being parallel to the elongating

direction and used for positioning said pinch rollers~~[[;]]~~, and

a ~~means such as a~~ positioning table adjusting the position of said untapered shaft.

7. (Currently Amended) The apparatus for elongating optical fiber base material according to claim 5, wherein the surfaces of said pinch rollers are winded and fixed woven fabric ~~made~~ comprising of heat-resistant material to prevent said pinch rollers from directly contacting to base material rod ~~made~~ comprising of metal.

8. (Withdrawn-Currently Amended) The method of elongating optical fiber base material according to claim 2, wherein a shorter rod ~~having almost~~ including substantially the same outer diameter as the desired base material rod is nipped and held by a pair of pinch rollers, and wherein a positioning adjustment apparatus supporting said pinch rollers is adjusted with the position of the apparatus using one of a vertical line of laser beam ~~[[or]]~~ and a plumb bob, which is parallel to the traveling direction of the base material ingot, runs through the ~~middle of the heater such as an electric furnace~~ heating means and the center point of the shorter rod, to determine the positions of said pinch rollers.

9. (Withdrawn-Currently Amended) The method of elongating optical fiber base material according to claim 2, wherein a jig comprising an upper board and a cylindrical part is mounted on a pair of pinch rollers, and a positioning adjustment apparatus supporting said pinch rollers is adjusted the position of the apparatus using one of a vertical line of laser beam ~~[[or]]~~ and a plumb bob, which is parallel to the traveling direction of the base material ingot, runs through the ~~middle of the heater such as an electric furnace~~ heating means and the center

Serial No. 10/585,986 10
Docket No. SH-0062PCTUS
RYU.026

point of the shorter rod, to determine the positions of said pinch rollers.

10. (Currently Amended) The method of elongating optical fiber base material according to claim 3, wherein a jig comprising an upper board and a cylindrical part is mounted on a pair of pinch rollers, and a positioning adjustment apparatus supporting said pinch rollers is ~~adjusted~~ adjusts the position of the apparatus using one of a vertical line of laser beam ~~[[or]]~~ and a plumb bob, which is parallel to the traveling direction of the base material ingot, runs through the middle of the ~~heater such as an electric furnace~~ heating means and the center point of the shorter rod, to determine the positions of said pinch rollers.

11. (Withdrawn-Currently Amended) The apparatus for elongating optical fiber base material according to claim 6, wherein the surfaces of said pinch rollers are winded and fixed woven fabric ~~made~~ comprised of heat-resistant material to prevent said pinch rollers from directly contacting to base material rod ~~made~~ comprised of metal.

12. (New) The method of claim 1, wherein a surface of said pinch rollers include concave grooves for stably nipping the base material rod mounted on a position adjustment table via a mechanical reference level included in an untapered shaft, and woven fabric comprising of a heat-resistant material is wound and fixed around the surface of the pinch rollers.

13. (New) The apparatus of claim 5, wherein a surface of said pinch rollers include concave grooves for stably nipping the base material rod mounted on a position adjustment table via a mechanical reference level included in an untapered shaft, and woven fabric comprised of a

Serial No. 10/585,986 11
Docket No. SH-0062PCTUS
RYU.026

heat-resistant material is wound and fixed around the surface of the pinch rollers.

14. (New) The method of claim 1, wherein the pinch rollers adjust position such that a straight line connecting a central axis of the heating means with the groove center of the roller grooves respectively formed on the surfaces of the pair of pinch rollers is parallel to the traveling direction of the base material ingot.

15. (New) The apparatus of claim 5, wherein the pinch rollers adjust position such that a straight line connecting a central axis of the heating means with the groove center of the roller grooves respectively formed on the surfaces of the pair of pinch rollers is parallel to the traveling direction of the base material ingot.

16. (New) The method of claim 5, wherein the pinch rollers are jointed with an untapered shaft including a reference edge face, pressed and fixed against the reference edge face of the untapered shaft, rotated and driven by a drive unit via the untapered shaft, the pair of the pinch rollers respectively including a concave roller groove on the facing surfaces of the pair of the pinch rollers.

17. (New) The apparatus of claim 5, wherein the surfaces of the roller grooves are with heat-resistant fabric wound and fixed by mechanical means around the surfaces of the rollers with no direct contact with the base material rod by the pinch rollers.

18. (New) The method of claim 1, wherein the roller groove of said pinch rollers includes both

Serial No. 10/585,986 12
Docket No. SH-0062PCTUS
RYU.026

the curvature radius which is larger than the outer diameter of said base material rod, and a V-shaped roller groove with a cross section including straight lines is formed on each surface of said pinch rollers comprised of metal, and wherein the facing roller grooves respectively formed on the surfaces of a pair of said pinch rollers nip and draw said base material rod.

19. (New) The apparatus of claim 5, wherein the roller groove of said pinch rollers includes the curvature radius which is larger than the outer diameter of said base material rod.

20. (New) The apparatus of claim 5, wherein the roller groove of said pinch rollers includes the V-shaped roller groove with a cross section including straight lines formed on each surface of said pinch rollers comprised of metal, and wherein the facing roller grooves respectively formed on the surfaces of a pair of said pinch rollers nip and draw said base material rod.